Referring now to FIG. **5**, there is shown an alternative embodiment of the invention wherein items similar to those described above having similar reference numerals with the distinguishing suffix "a" added. In this embodiment, the outer cylindrical surface **45***a*, defined the finger extension lips **41***a*, and the inner cylindrical mounting surface **46***a* of the collar **40***a* are formed with cooperating detents for releasable snap action inter-engagement and alignment of the components during assembly. In this instance, the inner cylindrical surface **46***a* of the collar **40***a* is formed with an outwardly rounded or arcuate-shaped protrusion **50***a* and the outer surface **45***a* of the lips **41***a* is formed with a complimentary shaped recess **60** for receiving the protrusion **50***a*.

The protrusion **50***a* preferably is located at a distance from the side of the collar which seats against the inner ring shoulder **38***a* corresponding substantially to the distance of the recess **60** from the shoulder **38***a*. The protrusion **50***a* of the collar **40***a* again has an inner diameter that is less than the diameter of the finger extension lips **41***a* with the curved configuration of the arcuate-shaped protrusion **50***a* serving to cam and force the finger extensions **36***a* and collar **40***a* apart during assembly to facilitate snap action engagement therebetween when the collar **40***a* is properly seated on the inner ring **14***a* against the shoulder **38***a*. Again, preliminary factory assembly of the locking collar **40***a* may be efficiently effected with the collar being properly located in mounted position for final tightening upon subsequent installation of the bearing assembly **10***a* on a shaft.

Referring now to FIGS. **6** and **7**, still another embodiment of the invention is shown, wherein items similar to those described above have been given similar reference numerals with the distinguishing suffix "b" added. In this embodiment, the collar **40***b* has a generally V-shaped protrusion **50***b* disposed at the juncture of inner cylindrical surfaces **46***b*, **60** of the collar **40***b*. The protrusion **50***d* again has a smaller internal diameter than the lips **41***b* of the finger extensions **36***b* and is forced onto the finger extensions **36***b* and into the groove **39***b* with snap action engagement. The inner cylindrical surfaces **46***b*, **58***b* of the collar **40***b* on opposite sides of the protrusion **50***b* have different diameters so as to both be in close relationship with the cylindrical surface **45***b* of the finger extension lips **41***b* and the bottom surface of the groove **39***b*, respectively.

In contrast to the first and second embodiments of the invention, in this embodiment the protrusion **50***b* does not extend around the entire inner annular surface of the collar **40***b*, but rather, only at discreet points, as shown in FIG. **6**. It will be appreciated, however, that the interference between the collar **40***b* and the finger extensions **36***b* at these discrete points, which are preferably symmetrically disposed, is sufficient to retain the components together.

Referring now to FIGS. **8–9**, there is shown another embodiment of the invention wherein items similar to those described above have been given similar reference numerals with the distinguishing suffix "c" added. In this embodiment, the protrusion of the locking collar **40***c* is defined by a separate annular resilient member **55** carried within the annular opening of the locking collar **40***c*. The illustrated annular resilient member **55** is an O-ring disposed within a rectangular groove **56** formed in the inner cylindrical surface **46***c* of the locking collar and sized so that a portion of the O-ring extends radially inwardly beyond the annular surface **46***c* to form a resilient protrusion. The cylindrical inner surface **46***c* of the locking collar preferably is only slightly larger than the outer diameter of the finger extension lips **41***c* such that upon positioning of the locking collar **40***c* onto the finger extensions **36***c* the O-ring **55** is forced substantially into the groove **56** and contained therein until reaching the recess or groove **39***c* of the finger extensions **36***c* at which time the O-ring **55** will snap into the recess for locating and retaining the locking collar **40***c* in preassembled position adjacent the inner ring shoulder **38***c*. The distance between side of the locking collar positionable against the inner ring shoulder **38***c* and the locking collar groove **56** corresponds substantially to the axial length of the finger extension groove **39***c* such that upon snap action engagement of the O-ring **55** into the groove **39***c* the locking collar **40***c* is located against the shoulder **38***c*. Following such preassembly of the locking collar **40***c*, the locking screw **42***c* can be tightened to deform the finger extensions **36***c* into secure engaging relationship with the shaft upon which it is mounted.

Referring now to FIGS. **10–11** still another alternative embodiment of bearing assembly is shown wherein items similar to those described above have been given similar reference numerals with the distinguishing suffix "d" added. In this embodiment, the inner cylindrical surface of the locking collar **40***d* and the outer surface of the finger extensions **36***d* are formed with cooperating threads **62**, **63**, respectively, which enable the locking collar **40***d* to be rotatably threaded onto the finger extensions **36***d* until reaching its preassembly position in abutting relation with the inner ring shoulder **38***d*. The threads **62**, **63** in this case form protrusions which retain the locking collar **40***d* in preassembled position. Again, following such preassembly, tightening of the locking screw **42***d* will deform the finger extensions into secure engagement with the shaft upon which the bearing assembly is mounted.

In summary, it will be seen from the foregoing that the invention provides a unique bearing assembly locking arrangement wherein the locking collar may be preassembled onto the inner bearing ring in the factory. The locking collar is provided with a protrusion along its inner annular surface, and the finger extensions of the inner ring are provided with a mating groove. Both the groove and the protrusion may be of various sizes and shapes, extending completely or partially along the annular surface, so long as the groove and protrusion are relatively sized so that there is an interference between the components when in their free state. In this way, when the collar is preassembled onto the inner bearing ring, the collar is held in the proper position for subsequent installation and tightening onto a shaft.

What is claimed is:

1. A bearing assembly comprising an inner ring for mounting on a shaft, an outer ring disposed concentrically about said inner ring, a plurality of rolling elements interposed between said inner and outer rings, said inner ring including finger extensions extending axially from a side thereof, a collar comprising a lone piece annular compressible member positionable circumferentially about said finger extensions, said finger extensions having an outer periphery formed with threads, said one piece annular member having an inner annular mounting surface formed with threads that are engageable with said finger extension threads for permitting said annular member to be rotatably threaded on to said finger extensions to a preassembled position, and said annular member having a fastening screw operable for causing said annular member to compress said finger extensions into locking engagement with a shaft following preassembled positioning thereon.

2. The bearing assembly of claim **1** in which said inner ring is formed with a locating shoulder, and said annular member is rotatably threaded onto said finger extensions into abutting engagement with said locating shoulder.

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